PATENT
Our Docket: P-TB 5072

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)   Group Art Unit: 1631
Sem et al.   )
)   Examiner: Not yet assigned
Serial No.: 10/040,895   )
)
)   I hereby certify that this correspondence
Filed: December 28, 2001   )   is being deposited with the United States
)   Postal Service as first class mail in an
For: METHODS FOR PREDICTING   )   envelope addressed to: Commissioner for
     FUNCTIONAL AND   )   Patents, Washington, D.C., 20231 on
     STRUCTURAL PROPERTIES OF)   April 3, 2002.
     POLYPEPTIDES USING   )
     SEQUENCE MODELS   )   By _____
)   John T. Murphy, Reg. No. 50,583
_____)
                                           ___April 3, 2002___
                                           Date of Signature

Commissioner for Patents
Washington, D.C.   20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. § 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, these references are listed on the attached Form PTO-1449, and a copy of each is enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and that their consideration be made of written record in the application file.
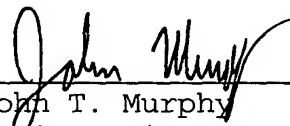
Inventors: Sem et al.
Serial No.:   10/040,895
Filed: December 28, 2001
Page 2

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-0370.

Respectfully submitted,

___April 3, 2002___
Date

John T. Murphy
Registration No. 50,583
Telephone: (858) 535-9001
Facsimile: (858) 535-8949

CAMPBELL & FLORES LLP
4370 La Jolla Village Drive
7th Floor
San Diego, California 92122
USPTO CUSTOMER NO. 23601

Form PTO 1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO: P-TB 5072	SERIAL NO. 10/040,895
		APPLICANT: Sem et al.	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE: December 28, 2001	GROUP 1631

U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
-		5,579,250	11/26/96	Balaji et al.			
.		5,705,335	01/06/98	Hendry			
		5,888,738	03/30/99	Hendry			

FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION (YES/NO)
		WO 96/30849	1996				
u							
.							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

		Baldi and Brunak, Bioinformatics: The Machine Learning Approach, MIT Press, Cambridge MA, Chapters 4-9, pp. 73-215 (1998).
		Bladon, "A Rapid Method for Comparing and Matching the Spherical Parameter Surfaces of Molecules and Other Irregular Objects," J. Mol. Graphics, 7:130-137 (1989).
		Böhm, "Towards the Automatic Design of Synthetically Accessible Protein Ligands: Peptides, Amides and Peptidomimetics," J. Comput.-Aided Mol. Des., 10:265-272 (1996).

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1449.pat

Form PTO 1449	US Department of Commerce Patent and Trademark Office	ATTY DOCKET NO: P-TB 5072	SERIAL NO. 10/040,895
		APPLICANT: Sem et al.	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE: December 28, 2001	GROUP RECEIVED 1631 APR 0 9 2002

TECH CENTER 1600/2900
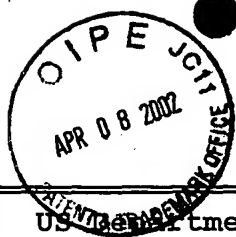
.		Brenner et al., "Understanding Protein Structure: Using Scop for Fold Interpretation," <u>Meth. Enzymol.</u>, 266:635-643 (1996).
.		Bycroft et al., "The Solution Structure of the S1 RNA Binding Domain: A Member of an Ancient Nucleic Acid-Binding Fold," <u>Cell</u>, 88:235-242 (1997).
		Carugo and Argos, "NADP-dependent Enzymes. I: Conserved Stereochemistry of Cofactor Binding," <u>Proteins: Struc., Funct., Genet.</u>, 28:10-28 (1997).
		Chau and Dean, "Molecular Recognition: 3D Surface Structure Comparison by Gnomonic Projection," <u>J. Mol. Graph.</u>, 5(2):97-100 (1987).
		Clore and Gronenborn, "Theory and Applications of the Transferred Nuclear Overhauser Effect to the Study of the Conformations of Small Ligands Bound to Proteins," <u>J. Magn. Reson.</u>, 48:402-417 (1982).
.		Dean and Callow, "Molecular Recognition: Identification of Local Minima for Matching in Rotational 3-Space by Cluster Analysis," <u>J. Mol. Graph.</u>, 5(3):159-164 (1987).
		Dean et al., "Molecular Recognition: Blind-Searching for Regions of Strong Structural Match on the Surfaces of Two Dissimilar Molecules," <u>J. Mol. Graph.</u>, 6:28-34 (1988).
		Dean and Chau, "Molecular Recognition: Optimized Searching Through Rotational 3-Space for Pattern Matches on Molecular Surfaces," <u>J. Mol. Graph.</u>, 5(3):152-158 (1987).
		Durbin et al., <u>Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids</u>, Cambridge University Press, 46-79 (1998).

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1449.pat

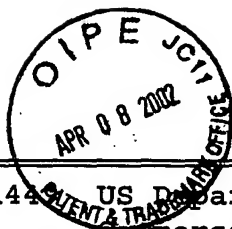| Form PTO 1449	US Department of Commerce Patent and Trademark Office	ATTY DOCKET NO: P-TB 5072	SERIAL NO. 10/040,895
		APPLICANT: Sem et al.	RECEIVED
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE: December 28, 2001	GROUP: APR 0 9 2002 1631

TECH CENTER 1600/2900

.		Eddy, "Profile Hidden Markov Models," Bioinformatics, 14(9):755-763 (1998).
.		Everse et al., The Pyridene Nucleotide Coenzymes, Academic Press, Chapters 3-5, pp. 51-180 (1982).
		Gribskov et al., "Profile Analysis: Detection of Distantly Related Proteins," Proc. Natl. Acad. Sci. USA, 84:4355-4358 (1987).
		Hadley and Jones, "A Systematic Comparison of Protein Structure Classifications: SCOP, CATH and FSSP," Structure, 7:1099-1112 (1999).
		Hubbard et al., "SCOP, Structural Classification of Proteins Database: Applications to Evaluation of the Effectiveness of Sequence Alignment Methods and Statistics of Protein Structural Data," Acta. Cryst., D54:1147-1154 (1998).
J		Jaakkola et al., "A Discriminative Framework for Detecting Remote Protein Homologies," J. Comput. Biol., 7:(1/2)95-114 (2000).
.		Kaufman and Rousseeuw, Finding Groups in Data: An Introduction to Cluster Analysis, Wiley-Interscience, 37-51 (1990).
		Koradi et al., "MOLMOL: A Program for Display and Analysis of Macromolecular Structures," J. Mol. Graphics., 14:51-55 (1996).
		Kuntz et al., "A Geometric Approach to Macromolecule-Ligand Interactions," J. Mol. Biol., 161:269-288 (1982).
		Kutzenko et al., "Conserved Supersecondary Structural Motif in NAD-Dependent Dehydrogenases," FEBS Lett., 423:105-109 (1998).
		Marino et al., "J-Coupling Restraints in RNA Structure Determination," Acc. Chem. Res., 32:614-623 (1999).

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1449.pat

RECEIVED
APR 0 9 2002
TECH CENTER 1600/2S

Form PTO 1449 US Department of Commerce Patent and Trademark Office		ATTY DOCKET NO: P-TB 5072	SERIAL NO. 10/040,895
		APPLICANT: Sem et al.	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		FILING DATE: December 28, 2001	GROUP: 1631

.		Martin, "3D Database Searching in Drug Design," J. Med. Chem., 35(12):2145-2154 (1992).
		Murzin et al., "SCOP: A Structural Classification of Proteins Database for the Investigation of Sequences and Structures," J. Mol. Biol., 247:536-540 (1995).
		Sayle and Milner-White, "RASMOL: Biomolecular Graphics for All," Trends Biochem. Sci., 20:374-376 (1995).
		Sem and Kasper, "Geometric Relationship Between the Nicotinamide and Isoalloxazine Rings in NADPH-Cytochrome P-450 Oxidoreductase: Implications for the Classification of Evolutionarily and Functionally Related Flavoproteins," Biochemistry, 31(13):3391-3398 (1992).
		Taylor and Smith, "The World Wide Web as a Graphical User Interface to Program Macros for Molecular Graphics, Molecular Modeling, and Structure-Based Drug Design," J. Mol. Graph., 14:291-296 (1996).
		Van Drie et al., "ALADDIN: An Integrated Tool for Computer-Assisted Molecular Design and Pharmacophore Recognition from Geometric, Steric, and Substructure Searching of Three-Dimensional Molecular Structures," J. Comput.-Aided Mol. Des., 3:225-251 (1989).
		Yang and Honig, "An Integrated Approach to the Analysis and Modeling of Protein Sequences and Structures. III. A Comparative Study of Sequence Conservation in Protein Structural Families Using Multiple Structural Alignments," J. Mol. Biol., 301:691-711 (2000).

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1449.pat